We claim:

1. A method of monitoring a connection unit, said connection unit comprising a primary connection map for receiving connection control signals and a primary connection circuit for performing primary connections between a plurality of inputs and a plurality of outputs in order to connect a plurality of input signals at said plurality of inputs to said plurality of outputs as output signals, said primary connections based on said connection control signals, said method comprising:

receiving said connection control signals;

receiving said plurality of input signals;

receiving said plurality of output signals;

selecting one of said plurality of input signals as a selected input signal;

selecting one of said plurality of output signals as a selected output signal,

where at least one of said selecting one of said plurality of input signals and said selecting one of said plurality of output signals is based on said connection control signals; and

determining a connection integrity status indicator from said selected input signal and said selected output signal.

2. The method of claim 1 wherein said determining said connection integrity status indicator comprises generating a signal indicative of a difference between said selected input signal and said selected output signal.

3. The method of claim 2 further comprising, if said difference indicative signal exceeds a threshold, indicating a connection fault.

4. The method of claim 2 further comprising, before said generating, matching a delay of said selected input signal to a delay of said selected output signal.

5. The method of claim 1 wherein both of said selecting one of said plurality of input signals and said selecting one of said plurality of output signals are based on said connection control signals.

6. The method of claim 1 wherein said selecting one of said plurality of input signals is performed arbitrarily.

7. The method of claim 1 wherein said selecting one of said plurality of output signals is performed arbitrarily.

8. A connection integrity monitor for monitoring a connection unit, said connection unit comprising a primary connection map for receiving connection control signals and a primary connection circuit for performing primary connections between a plurality of inputs and a plurality of outputs in order to connect a plurality of input signals at said plurality of inputs to said plurality of outputs as output signals, said primary connections based on said connection control signals, said monitor comprising:

a comparison map for receiving said connection control signals;

an input selection circuit for:

receiving said plurality of input signals;

selecting one of said plurality of input signals as a selected input signal;

an output selection circuit for:

receiving said plurality of output signals;

selecting one of said plurality of output signals as a selected output signal;

where at least one of said selecting one of said plurality of input signals and said selecting one of said plurality of output signals is based on said connection control signals;

a comparator for:

receiving said selected input signal;

receiving said selected output signal; and

determining a connection integrity status indicator from said selected input signal and said selected output signal.

9. The monitor of claim 8 wherein said comparator includes a difference circuit for generating a signal indicative of a difference between said selected input signal and said selected output signal.

10. The monitor of claim 9 wherein said difference circuit comprises an Exclusive OR gate.

11. The monitor of claim 9 wherein said comparator includes a threshold detector for determining whether said difference indicative signal exceeds a threshold.

12. The monitor of claim 9 wherein said comparator comprises a filter for filtering said difference indicative signal.

13. A method of monitoring a connection unit, said connection unit comprising a primary connection map for receiving connection control signals and a primary connection circuit for performing primary connections between a plurality of inputs and a plurality of outputs in order to connect a plurality of input signals at said plurality of inputs to said plurality of outputs as output signals, said primary connections based on said connection control signals, said method comprising:

receiving said connection control signals;

receiving said plurality of input signals;

receiving one of said plurality of output signals;

selecting one of said plurality of input signals as a selected input signal, where said selecting is based on said connection control signals; and

determining a connection integrity status indicator from said selected input signal and said received one of said plurality of output signals.